ENGINEERING CHANGE NOTICE

DART AEROSPACE LTD				ECN #: 804
Date: 15 MAY 2006				
Project No: D-350-591 REV. F	Created By:	Checked By:		
Project Name: 350 STEPS.	Approved By: (Proj. Manager)	Approved By: (Management if reqd)	N/A	

Description of Change:

DSI 9333 ADDED TO D-350-591 Rev. F TO ADD A NOTE FOR TORQUING.

Engineering Actions	Yes	No	Responsible	To happen by:	Complete
Required Documents Under Review?		✓			
Update Blue/Pink Folder/Electronic File	✓		KJ /SSH	06.05.17	06.05.18 KJ
Update DSI Folder/Electronic File	✓		KJ	06.05.17	06.05.18 KJ
Update D-Part Master Binder		✓			
Update Grey Project Binder	✓		KJ	06.05.17	06.05.18 KJ
Update DEO/DSI Binder	✓		KJ	06.05.17	06.05.18 KJ
Update Master Document List (MDL)		✓			
Update Drawing Approval Record (DR)	✓		KJ	06.05.18	06.05.18 KJ
Update Change Record Form		✓			
Move Electronic File	✓		KJ	06.05.17	06.05.18 KJ
Notify TCA of Change	✓	✗	DS	06.06.17	N/A 06.06.26
Notify FAA of Change		✓			
Update QSI 021 (TC/FAA STC)		✓			
Update QSI 036 (K-Kits)		✓			
Scan Documents		✓			
Update Accpac Database		✓			
Update Access Database		✓			
Verification ARC		✓			
Create/Update STC Approval List		✓			
Update Prod. Dev. Summary		✓			
Create/Update COSS (Estimate/BOM)		✓			
Create/Update PPP's		✓			
Update Paperwork Kits in Production	✓		LL KJ	06.05.19	06.05.18 KJ
Update Paperwork Kits in Stock	✓		LL	06.05.19	06.05.25 KJ
Rework/Scrap Current Production		✓			
Rework/Scrap Kits in Stock?		✓			
Update Qpulse	✓	✓			
Create/Update Controlled PDF Dwgs	✓		KJ	06.05.19	06.05.18 KJ
Create/Update FAI sheets		✓			
Create/Update CNC Programs		✓			
Create/Update Tooling		✓			
Create/Update DXF File		✓			
MPP required?		✓			
Notify Previous Customers	✓	✗	SERGE	ASAP.	
Notify Eurocopter France	✓	✗	SERGE	ASAP.	

Notes:

PROCEED AS INDICATED ABOVE,
UPDATE D350-591-311/312 IN STOCK ONLY /EVERYTHING IN PROD.
└→(26)
└→(34)
-311 (10) B27139
-312 (10) B27140
(10) B26254

ECN Complete: _____ Date: 06.06.27

APPLICABILITE (POUR INFORMATION SEULEMENT) / *APPLICABILITY (ONLY FOR INFORMATION)*: (1)
SAUF EXIGENCES PROGRAMME PARTICULIERES / *EXCEPT FOR SPECIFIC PROGRAM REQUIREMENTS*

[☑] **AS 350, 355, 550, 555**   [ ] **EC 130**   [ ] **EC120**   [ ] **AS 365, 565**   [ ] **EC155**   [ ] **AS 332, 532**

[ ] **Ancienne Gamme /** *former range*: ....   [ ] **Autres /** *others*: ....

FABRICANT + CODE OTAN / *MANUFACTURER + NATO CODE*:
....

CMM CONCERNÉ (si existant) / *AFFECTED CMM (if any)*
....

DESIGNATION DE L'EQUIPEMENT OU LOGICIEL CONCERNE
DESCRIPTION OF THE EQUIPMENT OR SOFTWARE AFFECTED

HELI-ACCESS STEP - LONG - RH/LH

TYPE DE L'EVOLUTION / *TYPE OF EVOLUTION* (1)

[ ] **MODIFICATION /** *MODIFICATION*
  Changement de P/N / *Part Number change*
[ ] **AMENDEMENT /** *AMENDMENT*
  Pas de changement de P/N / *no Part Numb*

Equipement spécifique État français
Equipment specific for French Government

[☑] **Amendement Mineur /** *Minor Amendment*
[ ] **Amendement Majeur /** *Major Amendment*

BUT DE L'ÉVOLUTION / *REASON FOR EVOLUTION* (2)

TO CLARIFY THE AMOUNT OF TORQUE REQ'D FOR INSTALLATION OF HELI ACCESS STEP

DESCRIPTION DE L'EVOLUTION / *DESCRIPTION OF THE EVOLUTION* (2)

PER DSI D.9333 A NOTE ADDED TO ADDRESS THE ISSUE OF TORQUING SEE ATTACHED DSI 9333 REF DART ECN # 804

IDENTIFICATION DE L'EVOLUTION / *EVOLUTION IDENTIFICATION*

| REFERENCE(S) OU AMENDEMENT(S) **AVANT** ⇒
REFERENCE(S) OR AMENDMENT BEFORE
• **N° Fabricant /** *Manufacturer N°*:
D.350-591-311/-312
• **N° Eurocopter /** *Eurocopter N°*
704A416 0012/11 | **EVOLUTION**
N°.............

(Code Fabricant /
Manufacturer Code) | ⇒ REFERENCE(S) OU AMENDEMENT(S) **APRES**
REFERENCE(S) OR AMENDMENT(S) AFTER
• **N° Fabricant /** *Manufacturer N°*:
D.350-591-311/-312
• **N° Eurocopter /** *Eurocopter N°*
704A416 0012/11 |

REPERCUSSIONS DE L'EVOLUTION / *EVOLUTION CONSEQUENCES* (1)

Left block legend: sans objet / *not applicable* — modifié / *changed* — conservé / *retained*
Right block legend: sans objet / *not applicable* — modifié / *changed* — conservé / *retained*

	conservé	modifié	sans objet		conservé	modifié	sans objet
Interchangeabilité fonctionnelle / *Functional interchangeability*	☑	☐	☐	**Equipement recevant le logiciel ou le module** / *Equipment receiving the software or the module*	☐	☐	☑
Interchangeabilité externe / *External interchangeability*	☑	☐	☐	**Référence ensemble supérieur (amendement ou modification)** / *Upper set reference (amendment or modification)*	☐	☐	☑
Interchangeabilité interne / *Internal interchangeability*	☑	☐	☐	**Essais de conformité aux normes** / *Standards conformity tests*	☐	☐	☑
DDP / *Declaration of Design and Performances*	☑	☐	☐	**Essais d'endurance** / *Endurance tests*	☐	☐	☑
Limitations (TBO, OTL, SLL ...)	☐	☐	☑	**Essais de fatigue** / *Fatigue tests*	☐	☐	☑
Analyse de sécurité / *FMECA*	☑	☐	☐	**Essais de certification** / *Certification tests*	☐	☐	☑
Fiabilité / *Reliability*	☑	☐	☐	**Essais de certification logiciels** / *Software accomplishment summary*	☐	☐	☑
Stockage, conditionnement / *Stockage, packaging*	☑	☐	☐	**Prix du neuf (3)** / *New equipment cost*	☐	☐	☑
Conditions de réception / *Acceptance Test Procedure*	☑	☐	☐	**Coûts de réparation (3)** / *Repair costs*	☐	☐	☑
Outillage de test équipement / *Equipment test tools*	☑	☐	☐	**Coûts non récurrents (3)** / *NRC: non recurring cost*	☐	☐	☑
Masse / *Weight :* ↳ [ ] **Alourdissement estimé /** *Estimated heaviness*: +........... [ ] **Allégement estimé /** *Estimated lightening*: -...........	☑	☐	☐	**Cycle de fabrication/ réparation** / *Manufacture / repair cycle*	☑	☐	☐

1) Cocher la case adequate / *Tick the applicable box*
2) Ce document donne la liste **exhaustive** des évolutions proposées /*This document gives the **exhaustive** list of the proposed evolutions*
3) Joindre les estimations financières en annexe de cette FEE / *Join the financial estimation in appendix to this document*

JUSTIFICATION FABRICANT / _MANUFACTURER JUSTIFICATIONS_
  Références des pièces jointes / _Enclosures references_

Si évolution d'ensemble électrique ou électronique, joindre obligatoirement un schéma de principe ou plan pré et post évolution de la fonction concernée / _If electric or electronic set evolution, it is mandatory to join a drawing or plan before and after evolution for the concerned function_

  - Référence du dossier de qualification / _Qualification file reference_ .... N/A
  - Déclaration de Performance / _Declaration of Design and Performance_ .... N/A
  - Essais de certification logiciels / _Software accomplishment summary_ ...... N/A
  - Autres / _Others_ .... DST 9333

But détaillé de l'évolution / _Detailed purpose of the evolution_

TO CLARIFY THE REQUIREMENT FOR TORQUING
THE INSTALLATION BOLTS, AN/S-36A.

Justification des essais remis en cause et leurs conséquences / _Impacted tests justification and their consequences_

NO TESTS AFFECTED

Fiches d'évolution équipement liées à ce document / _Equipment Change Sheets linked to this document_

N/A

Modifications de logiciel / _Software changes_ :

Justification technique de l'évolution (à renseigner si l'ensemble supérieur recevant le logiciel est modifié) (1)
Technical justification of the evolution (part to be filled if the upper set receiving the software is modified) (1)

N/A

Partie à remplir par le fabricant selon spécification Eurocopter (1) & (2)
To be filled by the manufacturer according to Eurocopter specification

Classe de l'équipement / _Equipment class_   ☐ A   ☐ B   ☑ C   ☐ D   ☐ E
Cocher la case appropriée / _Tick the appropriate box_

1) Dans le cas d'amendement d'un sous-ensemble, l'évolution de l'ensemble supérieur peut être un amendement non répertorié si l'ensemble supérieur n'est
  pas de classe A / _In case of subassy amendment, the upper set evolution can be a not listed amendment if the superior assembly is not of class A_

☒ **APPLICATION SUR MATERIEL NEUF** / *APPLICATION ON NEW PRODUCT* (1)
   ☐ **À PARTIR DU NUMERO DE SERIE** / *FROM SERIAL NUMBER:* .... ☒ **OU DATE** / *OR DATE :* ...06.05.15..
☐ **APPLICATION SUR MATÉRIEL DÉJÀ LIVRÉ** / *APPLICATION ON ALREADY DELIVERED EQUIPMENT* (1)

REALISATION DE L'EVOLUTION / *IMPLEMENTATION OF THE EVOLUTION*
   ☑ **Dans le réseau du fabricant** / *In manufacturer's network*
   ☐ **Par un réparateur JAR ou FAR 145** / *in a FAR or JAR 145 repair-station*
   ☐ **Par l'utilisateur** / *By the end-user*
   ☐ **Par Eurocopter** / *By Eurocopter*
ECHEANCE D'APPLICATION DE L'EVOLUTION / *DUE DATE OF EVOLUTION APPLICATION*
   ☐ **A la demande de l'utilisateur** / *On user's request*
   ☐ **En cas de premier retour** / *On first return*
   ☐ **Sur panne de la fonction seulement** / *Only on failure of function*
   ☐ **Rattrapage spécifique à la demande d'Eurocopter** / *Specific retrofit upon Eurocopter's request*
   ☐ **Rattrapage systématique de tous les équipements** / *Systematic retrofit of all the equipment :*
      ☐ **En révision générale** / *At overhaul*
      ☐ **À l'échéance de** / *Before due date :* ....

DOCUMENTATION / *TECHNICAL PUBLICATION* (1)
☐ **Service Bulletin** N° ....
   ☐ **Alerte** / *Alert (mandatory)*
      ☐ **Avec recommandation d'application** / *With recommendation*
   ☐ **Standard** / *standard*
      ☐ **Sans recommandation d'application** / *Without recommendation*

   ☐ **Maintenance 3° niveau (réparateur)** / *3° level of maintenance (repair-station) : Depot level*
            Non diffusé aux clients / *Not diffused to the customers*
☑ **Lettre Service** / *Service Letter* N°........DST....9339.........
☐ **CMM 1° et 2° niveau (client)** / *1° and 2° CMM level (customer) : O/I level*
☐ **CMM 3° niveau (maintenance 3° niveau)** / *3° CMM level (3° level of maintenance): Depot level*

Engagement du fabricant en cas d'Amendements uniquement
Manufacturer commitment in case of Amendment only
Par cette évolution, le fabricant s'engage à ne pas remettre en cause les points suivants, vis à vis de l'hélicoptère sur lequel il est monté, et dans le respect du domaine d'utilisation pour lequel il est prévu / *With this evolution, the manufacturer undertakes not to call into question the following aspects, with regard to the helicopter on which it has been installed, and in accordance with the intended operating envelope:*
   - **L'interchangeabilité physique et fonctionnelle** / *Physical and functional interchangeability*
   - **Les limitations et les performances** / *Limitations and performances*
   - **La fiabilité** / *Reliability*
   - **Les conditions de maintenance (visites périodiques, documentation...)** / *Maintenance conditions (scheduled maintenance checks, documentation...)*

VISA FABRICANT / *MANUFACTURER'S VISA*
Par son visa, le fabricant garantit toutes les informations données dans cette FEE dans le cas d'Amendement ou de Modification
By his visa, the manufacturer guarantees all the information given in this equipment evolution sheet in case of Amendment or Modification

DATE / *DATE* ......06.05.15..
NOM / *NAME* ......SERGE SHAHBAZIAN.........................
E-MAIL ......sshahbazian@dart.aero.com.........................
VISA ....

ACCORD EUROCOPTER / *EUROCOPTER AGREEMENT*	APPROBATION NAVIGABILITE EUROCOPTER *EUROCOPTER AIRWORTHINESS APPROVAL*	ÉTAT FRANÇAIS *FRENCH GOVERNMENT* Visa DPM/SQ *DPM/SQ visa*
☐ **Livraison sur site Eurocopter seulement** *Only for delivery in Eurocopter plant* **Modification: accord technique de la FEE, mais en aucun cas preuve d'approbation de la modification** / *Technical agreement of the equipment evolution sheet, but in no case proof of modification approval* ☐ **Accord définitif en cas d'amendement** *Definitive agreement in case of amendment*	**Seulement en cas d'amendement** *Only in case of amendment*	
DATE		
NOM		
VISA		

1) Cocher la case adequate / *Tick the applicable box.*

Susanne Sheldon

.om: Susanne Sheldon [ssheldon@dartaero.com]

Sent: Friday, May 19, 2006 3:45 PM

To: Rodolphe Lhermenault (E-mail)

Cc: Bill Beckett (E-mail)

Subject: FW:

Hi Rodolphe,

The Design Manager, Serge Shahbazian has confirmed the bolt is correct(see below).
If you need further information please do not hesitate to contact me.

Regards,

Susanne Sheldon, eng. CMA
Director Quality Assurance
Dart Aerospace Ltd.
Tel: 613-632-3336
Fax: 613-632-5246

-----Original Message-----
From: S Shahbazian [mailto:sshahbazian@dartaero.com]
     t: Friday, May 19, 2006 3:35 PM
. . 'Susanne Sheldon'
Cc: 'Bill Beckett (E-mail)'
Subject: RE:

Hi Susanne,
We checked the theoretical values and we concur the length of the bolt is correct.

Thanks
Serge

From: Susanne Sheldon [mailto:ssheldon@dartaero.com]
Sent: May 19, 2006 8:51 AM
To: Bill Beckett (E-mail); Serge Shahbazian (E-mail)
Subject: FW:

-----Original Message-----
From: Lhermenault, Rodolphe [mailto:RODOLPHE.LHERMENAULT@EUROCOPTER.COM]
Sent: Friday, May 19, 2006 5:56 AM
To: Susanne Sheldon
Subject:

Susanne,

Thank you for the document sent. Please I need a confirmation, would you ask your design office for verifying that the screw is
   ` enough for at the same time ensuring the 1.5 threads in safety and not put under stress the fitting. (theorical dimension
   .iyses)...=>verification to avoid a problem of screw length.

6/27/2006

Regards.

dolphe LHERMENAULT
ccI Structures
Tiger and commercial HC structure design office manager

☎ *33 (0)4.42.85.65.14*

🖃 *33 (0)4.42.85.92.61*

✉ *mailto:rodolphe.lhermenault@eurocopter.com*

Susanne Sheldon

:om: Susanne Sheldon [ssheldon@dartaero.com]

Sent: Thursday, May 18, 2006 1:44 PM

To: 'Lhermenault, Rodolphe'

Subject: RE: FEE 06

Rodolphe,

Attached is the FEE with the date added, and the DSI 9333. This DSI will be added to future installation instructions as a supplemental document.
Susanne

-----Original Message-----
From: Lhermenault, Rodolphe [mailto:RODOLPHE.LHERMENAULT@EUROCOPTER.COM]
Sent: Thursday, May 18, 2006 9:40 AM
To: Susanne Sheldon
Subject: RE: FEE 06

Susanne,

This morning I ask you to send me the updated document (installation instruction). Please I need also the Service letter and moreover you have to answer FEE page 3 at the top "the application date".
Thks.

Rodolphe

De : Susanne Sheldon [mailto:ssheldon@dartaero.com]
Envoyé : mercredi 17 mai 2006 20:46
À : Tardy, Bertrand; Placide, Patrice
Cc : Lhermenault, Rodolphe; Dale Trepanier (E-mail)
Objet : FEE 06

Please find attached an Equipment Evolution Sheet #06 for:

Eurocopter part no. 704A41640011

Eurocopter part no. 704A41640012

The change is to add DSI 9333 to the documentation as discussed with Rodolphe Lhermenault.

If you need clarification please contact me.

Susanne Sheldon eng, CMA
Director Quality Assurance
Dart Aerospace Ltd.
tel: 613 632 3336
fax: 613 632 5246
email: susannes@dartaero.com

6/27/2006